"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOV, V. P.

Yamshchikov, V. P.

"The variability of Morgan's bacillus under the influence of antibiotics." State Order of Lenin Inst for the Advanced Training of Physicians imeni S. M. Kirov. Chair of Microbiology. Leningrad, 1956. (Dissertation for the Degree of Candidate in Medical Sciences).

Knizhnaya letopis'
No. 21, 1956. Moscow.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOV, V. P.

USSR/ Pharmacology Toxicology, Chamotherapeutic Agents U-7

Abs Jour : Ref. Zh. Biol., No 2, 1958, No 8109

Author : Krashkin, P. N., Bezborodov, A. M., Yelinov, N. P., Kashkin, K. P., Marchenkova, F. G., Tzyganov, V. A., Yamshchikov, V. P.

Inst : -

Title : Materials on the Analysis of Failures in Antibiotic Therapy

Orig Pub : V. Sb. Antibiotki, Eksperim.-Khinich, Izuch. M., 1956. 274-290.

Abstract : Among the causes for failure in antibiotic therapy, the authors have emphasized bacterial resistance, appearance of moniliasis, and hormesis. An increased resistance to antibiotics is also characteristic of the facultative pathogens which more frequently develop a group tolerance. The streptomycin and biomycin resistant microorganisms

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undergo more profound and more stable biochemical changes than those resistant to penicillin, levomycin, and sintomycin, Most of the redistant strains have a decreased tolerance to warming, alcohol, and antiseptic solutions. Alongside the highly resistant strains, dependent strains appear as a result of adaptation, especially among the tubercle bacilli, which grow luxuriously on media saturated with proper antibiotics. Yeast-like organisms of the genus Candida are frequently responsible for fatal complications in patients with dysentery and pneumonia. Monilia infections affect the mucous membranes of the oral cavity, larynx, vagina and the large skin folds; less frequently ulcerative lesions in the alimentary tract and focal pulmonary involvement are encountered. Streptomycin, penicllin, sintomycin, levomycetin, biomycin and sakazin proved to be ineffective inkthe treatment of moniliasis. Gramicidin-C, aspergillin and aspergin demonstrated some effectiveness. Streptomycin, penicillin and aureomycin in various concentrations have, actually, increased the growth of Candida in special test-tube ex-

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periments. Rabbits with experimental moniliasis succumed to infection after 2 - 5 days if treated with penicillin, streptomycin, biomycin or levomycin, and ater 30-35 days if untreated. The phenomena of hormesis, i. e. the destruction of the normal microflora of the skin and mucous membranes, is associated with irrational antibiotic therapy. A number of patients demonstrated absence of coliform bacilli cultures, proliferation of Proteus, alkali-forming and putrefactive microorganisms the toxins of which cause toxemia on reaching the blood stream.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

ЯМЩЧИКОВ, V. P.

USSR /Microbiology. Antibiosis and Symbiosis. Antibiotics. F-2

Abs Jour: Referat Zh.-Biol., No. 9, 1957, 35572

Author : Kaskin, P.M.; Goliakov, P.N.; Kashkin, K.P.; Slubko, A.L.; Yamshchikov, V.P.

Title : Common Modifications Features in Conditionally Pathogenic Microorganisms Under the Influence of Antibiotics

Orig Pub: V sb: Zhiviye vaktsiny, M., 1956, 279-288

Abstract: Conditionally pathogenic faecal alkali-formers, enterococci, intestinal and "Morgan" bacilli possessed different sensitivity to streptomycin (I), biomycin (II), synthomycin (III), levomy-

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

USSR /Microbiology. Antibiosis and Symbiosis. Antibiotics. F-2

Abs Jour: Referat. Zh.-Biol., No. 9, 1957, 35572

cetin (IV), and pennicillin (V). In relation to the last two bacteria I, III, IV were much more active, and in relation to the faecal alkali-former-III. Enterococci showed sensitivity to V, I, and III. Passage on the media with growing content of antibiotics helped the development of a resistance in the microbes to the preparations studied. The microbes were most easily adapted to streptomycin. The intestinal bacilli, the faecal alkali-formers and partially the "Morgan" bacilli adapted more quickly than the others. In the highly resistant variants polymorphism of the cell elements and weak biochemical activity in comparison with the original cultures were noted. A comparison of the adaptive pathogenic

Card 2/3

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

USSR /Microbiology. Antibiosis and Symbiosis. Antibiotics. F-2

Abs Jour: Referat. Zh.-Biol., No. 9, 1957, 35572

and conditionally pathogenic microorganisms manifested common features in the modification of their morphological-biochemical properties.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOV, V.P.

AUTHOR: Kashkin, P. M., Zlatina, K. M., Golyakov, I. N., Kashkin, K. B. and Yamshchikov, V. P.

Inst; Not given

Title: Variability of Microorganisms in Leucccyte Cultures Under the Effect of Antibiotic Preparations.

Orig Pub: V. sb.: Zhivye vaktsiny, M., 1956, 289-295.

Abstract: Leucocytes develop well in the presence of doses of streptomycin, penicillin, syntomycin, biomycin, and levomycetin which exceed masimum therapeutic doses for humans, and therefore they may be utilized for studying adaptive variability of microorganisms under the influence of antibiotics. By transferring leucocytes in cultures with increasing concentration of a specific antibiotic, resistant variants were obtained of some conditionally pathogenic microorganisms. The common characteristics of resistant forms include weakening of carbolytic activity, viability and antigenicity in reactions with homologous sera by comparison with the initial strains.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOV, V.P.; BEZBORODOV, A.M.; YELINOV, N.P. (Cand. of Bio. Sci.); KASHKIN, K.P.; MARCHENKOVA, F.G.; TSYGANOV, V.A. (Cand. of Bio Sci.

"Materials on Analysis of Failures in Treatment With Antibiotics,"

p. 274 Ministry of Health USSR Proceedings of the Second All-Union Conference on Antibiotics, 31 May - 9 June 1957. p. 405, Moscow, Medgiz, 1957.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOV, V. P.

COUNTRY : USSR
CATEGORY :

ABS. JOUR. : RZhBiol., No. 3 1959, No. 10079

AUTHOR : Bezborodov, A. M., Kashkin, K. P., Yamshchikov, V. P.
INST. : Leningrad Chemical-Pharmaceutical Institute
TITLE : Certain Biochemical Characteristics of Bact. Faecalis Alcaligenes Resistant to Antibiotics

ORIG. PUB. : Sb. nauchn. tr. Leningr. khim.-farmatsevt. in-t, 1957, 3, 111-117

ABSTRACT : In the adaptation of certain strains of Bacterium faecalis alcaligenes to streptomycin and synthomycin /chloramphenicol/ the morphology of the bacteria was changed. The strains resistant to these antibiotics assumed the form of coccobacteria. The DNA concentration in the strains resistant to synthomycin increased (3-3.5%), and in strains resistant to streptomycin, decreased (1.4-1.7%) compared with the original (2-2.9%). In the resistant strains an increased consumption of pyruvic acid is observed. The strains

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

COUNTRY :
CATEGORY :

ABS. JOUR. : NZhBiol., No. 1959, No. 10079

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : adapted to streptomycin acquired the capacity of assimilating glutamic acid. Strains resistant to synthomycin formed a yellow pigment of carotinoid nature. The strains resistant to synthomycin and streptomycin lost the power of reducing nitrates. -- S. P. Shapovalova

Card: 2/2

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

"Comparative Study of Some Biochemical Characteristics of Proteus morgani Strains sensitive and resistent to Antibiotics," by A. M. Bezborodov, K. P. Kashkin, and V. P. Yamshchikov, Leningrad Chemico-pharmaceutical Institute, Zhurnal Microbiologii, Epidemiologii, i Immunobiologii, No 3, Mar 57, pp 108-113

Vol 28 pp 108-114

Since resistance is apparently caused by a change in different biochemical processes in the microbial cells; the author decided to study the elementary biochemical properties of strains adapted to antibiotics as compared to the original strains, and thus to discover the functions which change during adaptation.

Results obtained at the Chair of Microbiology of the Leningrad Chemicopharmaceutical Institute have demonstrated the possibility of producing resistant variants in the laboratory by passing them through agar media with antibiotic concentrations of increasing strength. The antibiotics used were synthomycin, levomycin, and streptomycin. The microorganism used was a strain of Proteus morgani, which is responsible for outbreaks of diseases of a paratyphoid character, toxic food infections, and various dysentery-like diseases.

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On the basis of the work done, it was concluded that:

"1. Proteus morgani strains, adapted to syntomycin, contain more desoxyribonucleic acid, but strains which are adapted to streptomycin have less than the original strain.

"2. There was no difference in the utilization of amino-nitrogen between the strains adapted to antibiotics and the original strains.

"3. Adapting strains develop the ability to assimilate a number of amino acids not natural to the original strains (glycocol, alanine, lysine, beta, Ophenylalanine). There is an especially marked increase in the yield of asparagin from adapted strains.

"4. In the majority of cases, the resistant strains lost the ability to produce indol. A relation between resistance and the nitrate-reductase activity could not be found.

"5. In the majority of cases, the resistant strains lost the ability to form acids and gas in media of the "varigated" series which is important in view of the differential clinical diagnosis of the microorganisms.

"6. The change in dehydrase activity did not depend on resistance to a specific antibiotic and was an individual property of a strain.

"7. In the process of adaptation to media with synthomycin, certain strains formed a pigment having a carotin-like character. (U)

Sum IN 1451

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOV, V.P.

Chronic B. breslau infection in an experiment. Eksp. i klin. issl. po antibiot. 1:146-148 '58. (MIRA 15:5)
(SALMONELLA)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

L 11253-65 EWT(1)/T JK

ACC NR: AR6022387 (N) SOURCE CODE: UR/0397/65/000/024/0065/0065

AUTHOR: Fel'dman, I. Kh.; Frankovskiy, Ch. S.; Yemshchikov, V. P.; Mordvinova, Ye. T.; Maryukhta, Yu. B.; Zaikina, N. A.; Vitovskaya, G. A.; Arkad'yeva, G. Ye. 39

TITLE: Azo-derivatives of benzene as potential antibacterial compounds. I. 6

SOURCE: Ref. zh. Farmakologiya. Toksikologiya, Abs. 24.54.512

REF SOURCE: Tr. Leningr. khim.-farmatsevt. in-ta, vyp. 18, 1965, 171-172

TOPIC TAGS: benzene, chemical compound, microorganism contamination, bacteria, plant parasite

ABSTRACT: An in vitro method of serial dilutions was used to test the activity of several synthetic azo-compounds in relation to dermatophytes, some gram positive and gram negative bacteria and two species of yeastlike molds. All the tested azo-compounds containing a carboxylic group proved inactive. The exception was 2,4-dichlor-3-carboxy-4'-oxyazobenzol. The azo-compounds displayed highest activity in relation to Cr. neoformans, weaker activity in relation to dermatophytes, and the weakest in relation to Candida albicans. Only

Card 1/2

UDC: 615.7

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

ACC NR: AR6022387

certain azo-compounds displayed antibacterial and antivirus action. The highest in vitro activity was displayed by 2,4-dichlor-4'-methyl-4-oxyazobenzol and 2,4-dichlor-4'-oxyazobenzol which proved most effective in relation to yeastlike molds and dermatophytes and weakest in relation to bacteria. M. Zabolotskaya. [Translation of abstract].

SUB CODE: 06, 07

Card 2/2 MT

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

MALYSHEVA, N.A., kand.tekhn.nauk; YAMSHCHIKOV, V.S., gornyy inzh.

Choice of a method of developing a conveyer dump and the length of the dump space. Gor. zhur. no.7:20-23 Jl '61. (MIRA 15:2)

1. Moskovskiy gornyy institut (for Malysheva). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut nerudnoy promyshlennosti, Stvaropol' (for Yamshchikov).

(Strip mining)
(Conveying machinery)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

BAZYLEV, V.G., kand.tekhn.nauk; MIKHAYLOV, V.A., kand.tekhn.nauk; OKOL'ZIN, Ye.P., inzh.; SIRENKO, V.N., inzh.; YAMSHCHIKOV, V.S., inzh.

Open working of deposits of carbonate rock. Sbor.trud.VNIINerud no.1:3-23 '62. (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut nerudnykh stroitel'nykh materialov i gidromekhanizatsii.
(Rocks, Carbonate) (Quarries and quarrying)
(Aggregates (Building materials))

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

RZHEVSKIY, Vladimir Vasil'yevich, prof., doktor tekhn. nauk; ISTOMIN, Viktor Vladimirovich, gornyy inzh.; YAMSHCHIKOV, Valeriy Sergeyevich, gornyy inzh.; Prinimali uchastiye: YASTREBINSKIY, M.A., gornyy inzh.; LEBEDKOVA, A.A., gornyy inzh.; OVCHINNIKOV, V.A., gornyy inzh.

[Technology and the overall mechanization of the open pit mining of coal, ore, and rock products] Tekhnologiia i kompleksnaia mekhanizatsiia otkrytoi dobychi uglia, rud i nerudnykh iskopaemykh. Moskva, Mosk. in-t radioelektroniki i gornoi elektromekhaniki. No.6. Pt.1. 1963. 151 p. (MIRA 17:8)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

ACC NR: AR6009030 SOURCE CODE: UR/0169/65/000/010/D028/D029

AUTHOR: Yamshchikov, V. S.

TITLE: On the directivity of the wave field of an ultrasonic radiator in bedrock

SOURCE: Ref. zh. Geofizika, Abs. 10D194

REF SOURCE: Nauchn. tr. Mosk. in-ta radioelektroniki i gorn. elektromekhan., sb. 52, vyp. 2, 1964, 91-95

TOPIC TAGS: ultrasonic radiation, ultrasonic property, ultrasonic wave propagation, bedrock ultrasonic property, MINERAL

ABSTRACT: Results of an experimental study of the directivity characteristics of a lead zirconate titanate ceramic ultrasonic radiator of a piston type are discussed. Rock core samples of 8 - 12 cm diameter, 5 - 6 cm long were used. The samples were cut into two half-disks; their center part was contacted by the radiator, with the receiver contacting the periphery and the polar distribution of ultrasound intensity was observed in a 180° sector. Directionality plots are given for samples of peridotite and limestone, at 500 kc. Knowledge of these directional characteristics is useful in the choice of rational plans for ultrasound receiver locations in the studies of bedrock properties. [Translation].

UDC: 552.1:53

SUB CODE: 04, 20/ SUBM DATE: None

Card 1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

DMITRIYEV, A.P., dotsent; DOBROVOL'SKIY, G.N., inzh.; KUZYAYEV, L.S., inzh.; TRET'YAKOV, O.N., inzh.; YAMSHCHIKOV, V.S., inzh.

Determining certain physical properties of rock for estimating their drillability by thermal piercing. Izv. vys. ucheb. zav.; gor. zhur. no.8:86-90 Jl '64 (MIRA 18:1)

1. Moskovskiy institut radioelektroniki i gornoy elektromekhaniki. Rekomendovana kafedroy fiziki gornykh porod.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

ACCESSION NR: AP5001030 S/0049/64/000/011/1697/1699

AUTHOR: Yamshchikov, V.S.

TITLE: Influence of intensity on the absorption of ultrasonic waves in rocks

SOURCE: AN SSSR. Izvestiya. Seriya geofizicheskaya, no. 11, 1964, 1697-1699

TOPIC TAGS: rock, geophysics, ultrasonic wave, geophysical instrument, prospecting, ultrasound, wave attenuation

ABSTRACT: The attenuation of elastic waves is one of the principal characteristics used in geophysics and mining to study the properties and structure of rocks in the field and the

tensity of an ultrasonic wave on the
determining the region of linear dependence between the intensity and absorption
waves, that is, the limit of the effect of this linear relationship. The study was made
using different rocks in an ultrasonic range
experimental apparatus is shown
emanating from the quartz piezoelectric
Card 1/5

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ACCESSION NR: AP5001050

of liquid into the investigated rock sample. The oscillations passing through the sample are detected by a ceramic piezoelectric converter with a frequency close to the frequency of the quartz plate and are fed to the amplifying channel of an electronic oscillograph whose cathode-ray tube is used for measurement of the amplitude of the detected oscillations. Further details on the apparatus are provided. In the experimental method the change in intensity of the radiation of the quartz converter by a certain value on the screen of the cathode-ray tube of the oscillograph is used for determining the amplitude of the ultrasonic wave passing through the sample. Each measurement is repeated several times. Results are presented in a table. Fig. 2 of the Enclosure shows the graphic dependence of the relative amplitude of an ultrasonic wave passing through a rock sample on the intensity of the ultrasonic wave for limestone and peridotite. The curves show that at rather high intensities, there is a nonlinear dependence for both rock types between the intensity and absorption of the ultrasonic wave. The point of appearance of the nonlinear region is different from different rocks. For rocks with a high absorption coefficient it begins somewhat later (I=1.4-1.6 watt/cm^2) than for dense rocks (for peridotite I = 1.2-1.4 watt/cm^2). These results should be taken into account in developing ultrasonic apparatus for investigation of rocks and in the method for measurement of absorption of an

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ACCESSION NR: AP5001050

2

ultrasonic wave. "The author wishes to thank V. G. Yegurnov for assistance in carrying out the experiment". Orig. art. has: 1 formula, 3 figures and 1 table.

ASSOCIATION: Moskovskiy institut radioelektroniki i gornoy elektromekhaniki (Moscow Institut of Radioelectronics and Mining Electromechanics)

SUBMITTED: 16Nov63 ENCL: 02 SUB CODE: ES

NO REF SOV: 003 OTHER: 000

Card 3/5

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

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ACCESSION NR: AP5001050

ENCLOSURE: 01

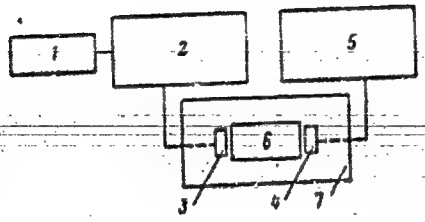

Fig. 1. Block diagram of the experimental apparatus. 1 - voltage stabilizer; 2 - ultrasonic oscillator; 3 - ultrasonic source; 4 - receiver; 5 - oscillograph; 6 - sample; 7 - bath with water.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

L 21751-65

ACCESSION NR: AP5001050

ENCLOSURE: 02

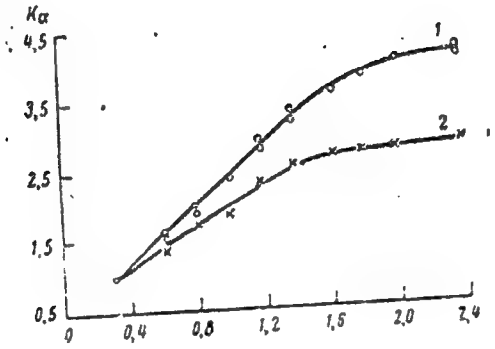

Fig. 2. Dependence of relative amplitude of an ultrasonic wave passing through a sample on intensity of oscillations. A. y watts/cm^2

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

RZHEVSKIY, V.V., prof., doktor tekhn.nauk; VAYNSHTOK, I.S., kand.tekhn.nauk; YAMSHCHIKOV, V.S., gornyy inzh.

Ultrasonic impulse device for studying rocks. Gor.zhur. no.1:72-73 Ja '65. (MIRA 18:3)

1. Moskovskiy institut radioelektroniki i gornoy elektromekhaniki.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

ACCESSION NR: AP5016209 [illegible]

AUTHOR: Yamshchikov, V. S. Moscow

TITLE: Nature of elastic wave damping in rocks in a region of small intensity oscillations

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 3, 1965, 134-136

TOPIC TAGS: elastic wave, damping factor, acoustic frequency, rock, wave propagation

ABSTRACT: The elastic damping of acoustically generated waves in rocks was studied experimentally. The schematic of the test is shown in Fig. 1 on the Enclosure, where 1- is the stabilizer, 2- ultrasonic generator, 3- emitter, 4- [illegible] oscillogram, 5- specimen, 6- bath. The bath is filled with water which serves as contact layer. The emitter is a quartz plate with a natural frequency [illegible] kcycle. The maximum power P is about 8.5-[illegible] volts over a 4-cm² area. To make the results independent of the absorptive property of the particular rock under study, the following ratio is introduced: $K_\alpha = A_i/A_0$, where A_i is the measured amplitude at the corresponding radiation intensity and A_0 is the initial amplitude with intensity 0.23 volt/cm². Two types of rocks were investigated: a diabase and a

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

L [illegible]

ACCESSION NR: AP5018209

peridotite. Both transverse and longitudinal wave damping were investigated in the [illegible]

[illegible]

[illegible] analytical considerations that a terminal amplitude in a longitudinal wave does show nonlinear effects which are absent from the transverse wave amplitudes. Orig. art. has: 4 formulas, 2 figures, and 1 table.

ASSOCIATION: none

SUBMITTED: 03Jun64 ENCL: 01 SUB CODE: MT, ME

NO REF SOV: 003 OTHER: 000

Card 2/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

E 63208-65

ACCESSION NR: AP5018209

ENCLOSURE: 01

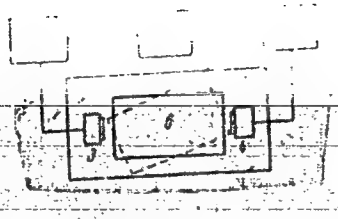

Fig. 1.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

L 00766-67 EWT(1)/EWT(m)/T/EWP(w)/EWP(t)/ETI GW JD

ACC NR: AP6022185 SOURCE CODE: UR/0415/65/000/006/0058/0063

67
B

AUTHOR: Yamshchikov, V. S.

ORG: Institute of Radio Electronics and Mining Electromechanics, Moscow (Institut radioelektroniki i gornoy elektromekhaniki)

TITLE: Use of the ultrasonic pulse method for studying the strength of rocks 16

SOURCE: Fiziko-tekhnicheskiye problemy razrabotki poleznykh iskopayemykh, no. 6, 1965, 58-63

TOPIC TAGS: ultrasonic wave propagation, ultrasonic inspection, compressive strength, carbonate, PETROLOGY, ELASTIC DEFORMATION, PLASTIC DEFORMATION

ABSTRACT: Data are given from an investigation of the strength of rocks determined on the basis of one or several ultrasonic characteristics. The specimens were carbonate rocks from the Podolsk deposit. The MIRGEM-I-V ultrasonic pulse instrument was used for measuring the acoustic characteristics of the specimens. Measurements of propagation velocity were accurate within ±(1-2%). The mean square error in measurement of the attenuation factor was ±10%. The experimental results show a pronounced increase in the rate of propagation of elastic waves with compressive strength. However, the extreme scatter in experimental data precludes the derivation of a strict relationship between these indices. The maximum strength of carbonate rocks depends on the rate of

Card 1/2 UDC: 552.1:539.4

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

L 00766-67

ACC NR: AP6022185 O

development of both elastic and plastic deformations up to the moment of destruction. The experimental data show that plastic deformations in carbonate rocks are associated with the plastic properties of the structure and the effect of porosity. Experimental stress-deformation diagrams were used for determining elastic and plastic indices of the rocks. Empirical expressions are given for the elastic limit and apparent maximum strength as functions of the velocity of the ultrasonic wave and for the coefficient of plasticity as a function of the ultrasonic attenuation factor at a frequency of 500 kc. An analysis of these relationships shows that each of the acoustic characteristics is uniquely associated with the given types of deformation. These empirical formulas are used as the basis for deriving an approximate expression for maximum compressive strength of carbonate rocks in terms of the velocity of ultrasonic propagation and ultrasonic attenuation. This formula is satisfactorily confirmed by experimental data within an accuracy of ±(10-25%). Deviations of the theoretical strength indices from the experimentally measured values are due to the fact that the strength of carbonate rocks is a complex function of a large number of factors for which relationships are difficult to establish. Orig. art. has: 3 figures, 2 tables, 3 formulas.

SUB CODE: 08/ 20 SUBM DATE: 11May65/ ORIG REF: 007

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

DMITRIYEV, A.P., dotsent; YAMSHCHIKOV, V.S., inzh.

Elasticity of rocks and its effect on their drill ability by thermal piercing. Izv. vys. ucheb. zav.; gor. zhur. 8 no.7: 98-102 '65. (MIRA 18:9)

1. Moskovskiy institut radioelektroniki i gornoy elektromekhaniki. Rekomendovana kafedroy fiziki gornykh porod.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

L 04306-67 EWT(1) GW

ACC NR: AR6014575 SOURCE CODE: UR/0169/65/000/011/G016/G016

AUTHORS: Yakobashvili, O. P.; Yamshchikov, V. S.

TITLE: Ultrasonic methods for determining the elastic parameters of rocks 49

SOURCE: Ref. zh. Geofizika, Abs. 11G121 B

REF SOURCE: Nauchn. tr. Mosk. in-t radioelektroniki i gorn. elektromekhan., sb. 51, 1965, 12-18

TOPIC TAGS: ultrasonic wave, ultrasonic wave propagation, seismology, seismic wave, earth crust, PETROLOGY

ABSTRACT: Dynamic methods for determining elastic parameters of rocks are based on measuring the distribution velocities of the elastic waves in specimens and may be divided into two groups: 1) direct methods (ultrasonic impulse methods) in which the time t needed for the distribution of a wave through a specimen and the length ℓ of the specimen are measured; 2) indirect (resonance methods) in which the wave length λ at a desired frequency f (corresponding to the oscillations produced), is measured. A comparison of the existing methods for determining the elastic parameters of rocks by the ultrasonic impulse method is presented. These methods involve: a) sound distribution; b) the immersional method. Both methods are briefly described. It is concluded that, with the method of time distribution, only the velocity of longitudinal waves in a formation may be reliably determined. By using the immersion method, the velocities of both the longitudinal and the transverse waves may be determined with sufficient accuracy. From these, all the elastic constants of a given rock may be calculated. R. M. [Translation of abstract]

Card 1/1 gd SUB CODE: 08 UDC: 552.1:53

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

L 44364-66 EWT(d)/EWP(c)/EWP(k)/T/EWP(v)/EWP(l) IJP(c)
ACC NR: AP6021385 (A) SOURCE CODE: UR/0101/66/000/002/0020/0021

AUTHOR: Yamshchikov, V. S. (Candidate of technical sciences); Levushkin, L. N. (Engineer); Bondarenko, V. G. (Engineer); Sviridov, V. M. (Engineer)

ORG: Moscow Institute of Radioelectronics and Mining Electromechanics (Moskovskiy institut radioelektroniki i gornoy elektromekhaniki); Podol'sk Cement Plant (Podol'skiy tsementnyy zavod)

TITLE: The use of ultrasonic waves in the quality control of carbonate rocks

SOURCE: Tsement, no. 2, 1966, 20-21

TOPIC TAGS: cement, carbonate, quality control, ultrasonic wave propagation

ABSTRACT: The feasibility of applying ultrasonic wave propagation for quality control of carbonate rocks to be used in the cement industry was investigated. A correlation between the mineral composition of the carbonate rocks and the rate of ultrasonic wave propagation was established. Maximum wave propagation of 2500 m/sec corresponds to dolomite-free rocks. For rocks containing from 0 to 16-20% dolomite, the ultrasonic wave propagation is 2500-2000 m/sec. The accuracy of the determination of the carbonate rock composition by the ultrasonic wave propagation technique is ±2%. Be-

UDC: 666.94.022 : 620.179.16

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L 44364-66

ACC NR: AP6021385

cause of the high degree of accuracy and simplicity, the ultrasonic wave propagation method is recommended for use by the cement industry. Orig. art. has: 1 table.

SUB CODE: 08,20,11/ SUBM DATE: none/ ORIG REF: 003

Card 2/2 hs

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOV, Valeriy Sergeyevich; RZHEVSKIY, V.V., prof., doktor tekhn. nauk, nauchn. red.

[Ultrasonic and sonic methods of investigating rocks] Ul'trazvukovye i zvukovye metody issledovaniia gornykh porod. Moskva, Mosk. in-t radioelektroniki i gornoi elektromekhaniki, 1964. 70 p. (MIRA 18:5)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

MIKHAYLOV, V.A., kand.tekhn.nauk; OKOL'ZIN, Ye.P., inzh.; YAMSHCHIKOV, V.S., inzh.

Using conveyer-belt transportation. Mekh.i avtom.proizv. 16 no. 2:22-23 F '62. (MIRA 17:3)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOV, Yu.

Work and people of the Ust' Donetsk Harbor. Rech. transp. 21 no. 10:22-23 O '62. (MIRA 15:10)

1. Zamestitel' nachal'nika Ust' Donetskogo porta.

(Ust'-Donetsk—Harbor)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

24(4) SOV/51-6-4-17/29

AUTHORS: Obreimov, I.V. and Yamshchikov, Ye. F.

TITLE: The Dispersion Curves of Chloroform and Carbon Tetrachloride in a Wide Range of Temperatures (Krivyye dispersii khloroforma i chetyrekhkhloristogo ugleroda v shirokom intervale temperatur)

PERIODICAL: Optika i Spektroskopiya, 1959, Vol 6, Nr 4, pp 517-522 (USSR)

ABSTRACT: The present paper is a continuation of earlier work (Refs 1, 2). It deals with the dispersion curves of CCl_4 and $CHCl_3$ between 2800 and 6200 Å at temperatures from 0 to 77°C for CCl_4 and from -3 to +53°C for $CHCl_3$. The cell used is shown in Fig 1. It was made of quartz glass transparent in ultraviolet. It consisted of a solid piece 1 with two tubes for admission of the liquid (6) and removal of air (7), a spacer 2, a cover 3 and a special plate 4. The complete assembly is shown in the right-hand part of Fig 1. The plate 4 had two parallel sides as shown in Fig 2. The light fell normally to the sides a and a' and grazed along the side ABCD. The side c made an angle of about 45° with side a. Consequently a and c formed a prism which deviated rays towards the base if $\mu_1 < \mu_q$ and towards the vertex when $\mu_1 > \mu_q$ (μ_1 and μ_q are the refractive indices of the liquid in the cell and the quartz plate respectively). A ray which missed the side c

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and a ray deviated by c interfered with one another. The interference pattern could be seen by illuminating the quartz plate of Fig 2 with white light and focusing the shadow (Fig 3) of the plate on to a spectroscope slit placed at right angles to the edge CD of the plate. The pattern is shown in Fig 3 where the dark band is the shadow of the face c. The bright band which intersects this dark band at $\lambda = \lambda_o$ corresponds to a ray deviated by the dihedral angle with the edge FG. A chain of oval spots, shown as 2 in Fig 3, is the Fresnel diffraction pattern of a ray which grazes the side ABCD. The centre of the gap between two dark spots corresponds to the wavelength at which

$$\mu_1 - \mu_q = m\lambda/d \qquad (1)$$

where d is the thickness of the layer studied and n is an interger.

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When n = 0, $\lambda = \lambda_0$ and the refractive indices of quarts and the liquid are equal. From this the values of λ and μ_1 at n = 1, 2, 3... can be deduced and the dispersion curve can be constructed. The regions between the experimental values of μ and λ were interpolated by means of Sellmeier's formula with three constants

$$\mu^2 = A + B/(\nu_0^2 - \nu^2) \qquad (2).$$

The values of A, B and ν_0^2 at 20°C are given in Table 1. The dispersion of CCl_4 is shown in Fig 9, in the form of $\Delta\mu' = f(\lambda)$, where $\Delta\mu' = \mu_1 - \mu(t)$, μ_1 is the refractive index at 19.0°C and t is temperature. Similarly the dispersion of $CHCl_3$ is plotted in Fig 10 as a function $\Delta\mu'' = f(\lambda)$, where $\mu'' = \mu_2 - \mu(t)$, μ_2 is the refractive index at 20.2°C and t is temperature. Lines 1-6 in

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

The Dispersion Curves of Chloroform and Carbon Tetrachloride in a Wide Range of Temperatures

Fig 9 and 1-3 in Fig 10 represent the dispersion curves at various temperatures; they confirm that a change of temperature displaces the dispersion curves parallel to themselves. There are 10 figures, 3 tables and 8 references, 7 of which are Soviet and 1 English.

SUBMITTED: May 29, 1958

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

68312

24,3400

AUTHOR: Yamshchikov, Ye.F.

S07/51-8-1-11/40

TITLE: The Dispersion Curve of Gaseous n-Pentane

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 1, pp 61-65 (USSR)

ABSTRACT: The paper reports determination of the dispersion curve of gaseous n-pentane and calculation of the oscillator strength f. The refractive index was measured using Jamin-type interferometer with fused quartz plates 20 mm thick Tubes 17.26 cm long, were placed in each beam of the interferometer. One of these tubes was evacuated to below 0.1 mm Hg, the other was filled with n-pentane vapours. The ends of the tubes were sealed with thin sheets of polythene or caprone (Fig 1). N-pentane was obtained from the laboratory of Academician B.A. Kazanskiy. A compound source of light was used, consisting of an arc between two iron electrodes with a beam from a very-high-pressure krypton lamp passing between the electrodes (Fig 3). Before measurements the instrument was calibrated by obtaining the dispersion curve of dry air and comparing it with the reported measurements of Meggers and Peters (Ref 3); the two sets of results agreed between 2500 and 5000 Å. The refractive index of n-pentane at 0°C and 760 mm Hg was found to be 1.001780 for λ = 5570.29 Å. The dispersion curve of

Card 1/2

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68312

The Dispersion Curve of Gaseous n-Pentane

SOV/51-8-1-11/40

n-pentane was obtained between 2330 and 5800 Å. The experimental results could be fitted quite well to a Sellmeier curve (at 760 mm Hg and 0°C):

$$\mu^2 = A + B/(\nu_0^2 - \nu^2),$$

where A = 1.0007532, $\nu_0^2 = 93.1340 \times 10^8$, $B = 25.2124 \times 10^6$. The differences between the Sellmeier and experimental values are shown in Fig 7. The value of B was used to calculate the oscillator strength; it was found to be f = 9.74. Acknowledgment is made to I.V. Obreimov for his advice. There are 8 figures, 1 table and 3 references, 1 of which is Soviet, 1 English and 1 German.

SUBMITTED: June 20, 1959

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

S/076/60/034/012/026/027
B020/B067

AUTHOR: Yamshchikov, Ye. Ye.

TITLE: Correction of the Refractive Index of n-Pentane

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 12, p. 2845

TEXT: When measuring the refractive indices of n-heptane vapors in a wide range of wavelengths, a value μ_D = 1.001772 was obtained which considerably differs from the value of 1.001711 given in the Landolt-Börnstein tables. When comparing the result obtained with data by Friberg (Ref. 2) for methane, ethane, and propane in the gaseous phase, it was found that the value of the refractive indices for n-pentane vapors lies on a straight line which corresponds to Friberg's data for methane, ethane, and propane. Hence, it may be assumed that the value given for the refractive indices of n-pentane vapors in the Landolt-Börnstein tables can be replaced by the value μ_D = 1.001772 for t = 0°C and a pressure of p = 760 mm Hg. Academician B. A. Kazanskiy is mentioned. There are 1 figure and 2 non-Soviet references: 1 Swedish and 1 German.

Card 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

Correction of the Refractive Index of n-Pentane

S/076/60/034/012/026/027
B020/B067

ASSOCIATION: Akademiya nauk SSSR, Institut elementoorganicheskikh soyedineniy (Academy of Sciences USSR, Institute of Elemental-organic Compounds)

SUBMITTED: March 5, 1959

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOV, Ye.F.

Dispersion curves of n.perfluoroheptane and completely fluorinated methylcyclohexane. Opt. i spektr. 12 no.6:793-799 Je '62. (MIRA 15:5)

(Dispersion) (Heptane--Optical properties)
(Cyclohexane--Optical properties)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOV, Ye.F.

Dispersion curves of n.pentane, isopentane, and n.octodecane.
Opt. i spektr. 12 no.6:799-801 Je '62. (MIRA 15:5)
(Dispersion) (Hydrocarbons—Optical properties)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

JANSHCHIKOVA, A.I. , DEMENT'EV,M.L. and KIESHER,M.L.

"Lambliasis in the Aetiology of Entero-colitis in Moscow Infants, and its Treatment."

No. 3, 42-46, May- June, 1950. 14 refs.

A group of 71 children between the ages of 1½ and 3 years was collected inn special nursery because they were all said to be suffering from chronic dysentry, which is not uncom on in Moscow. All these children were tested for lambliasis. Samples of fresh faeces wereprepared in two ways: (1) with physiclogical saline and (2) with Lugol's solution. In faeces from 40 children vegtative and encysted from of Lamblia intestinalis were found. This result was compared with that of an investigation of 34 healthy children in another nursery, who had suffered from acute gastro- enteritis of different duration in the past. Lambliae were found in only 12 of these healthy children.
After a course of (acrikhine) (?mepacrine) for five days, lambliae were still present in the faeces in half the number of children. After a second course of acrikhine for 3 days(dosage scheme not given) a better result was obtained, but not a complete cure at all. The authors recommend for infants suffering an enteric from of lambliasis a full 5-day course of acrikhine, and then two 3-day courses with a 10-day interval. All children who have suffered from gastro-enteritis for any length of time, irrespective of whether they have had dysentery or not, required repeated tests for lambliasis. Abstracted in World Medicine, Vol. 8 1950.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOVA, A. I.

USSR/Physics - Technical Physics

Card 1/1 Pub. 22 - 22/47

Authors : Finkel'shteyn, B. N., and Yamshchikova, A. I.

Title : Effect of aluminum on the magnitude of interatomic silver bonds

Periodical : Dok. AN SSSR 98/5, 781-782, Oct 11, 1954

Abstract : Measurements were conducted to determine the concentration dependence of activation energy of Ag self-diffusion in an Ag-Al alloy. This value was found to be connected with the heat of sublimation, which is accepted as a measure of energy of the crystalline lattice, by a certain empirical ratio. The effect of increased Al-content on the elasticity modulus is explained. The effect of component valences on the interatomic Ag-bonds is described. Six references: 5-USSR and 1-German (1949-1953). Tables; graph.

Institution : The I. V. Stalin Steel Institute, Moscow

Presented by: Academician V. G. Kurdyumov, May 18, 1954

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

FINKEL'SHTEYN, B.N., professor, doktor fiziko-matematicheskikh nauk; YAMSHCHI-KOVA, A.I., kandidat tekhnicheskikh nauk.

Effect of alloy composition on interatomic bonds in aluminum-silver systems. Sbor.Inst.stali 34:36-47 '55. (MLRA 9:7)

1.Kafedra fiziki.
(Aluminum-silver alloys) (Silver--Isotopes)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOVA, A. I., FINKELSHTEYN, B. N. (Prof.)

"The Effect of the Alloy Compound on the Inter-Atomic Binding in an Aluminum-Silver System," In book: The Application of Radioisotopes in Metallurgy, Symposium XXXIV; Moscow, State Publishing House for Literature on Ferrous and Nonferrous Metallurgy, 1955.

FINKELSTEIN, B. N. (Prof.), Dr. Phys.-Math. Sci., Chair of Physics, Moscow Inst. of Steel im I. V. Stalin; YAMSHCHIKOVA, A. I. (Ass't.)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOVA, A.I., kand.tekhn.nauk

Effect of vanadium, molybdenum, niobium on the properties of titanium alpha-alloys. Metallovedenie 3:279-297 '59. (MIRA 14:3)

(Titanium alloys—Metallurgy)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOVA, A. I.

PHASE I BOOK EXPLOITATION SOV/3752

Metallovedeniye; sbornik statey, No. 3 (Physical Metallurgy; Collection of Articles, No. 3), Leningrad, Sudpromgiz, 1959. 390 p. 3,200 copies printed.

Ed.: G. I. Kapyrin, Candidate of Technical Sciences; Literary and Tech. Ed.: N. I. Doronenko.

PURPOSE: This collection of articles is intended for scientific personnel at research and educational institutions and industrial plants and also for advanced students.

COVERAGE: The articles report the results of investigations of 1) the effect of various factors on the susceptibility of constructional and heat-resistant steels and titanium alloys to brittle failure at various temperatures under various conditions of loading (long-time, short-time, cyclic, noncyclic) 2) alloying, structure, and condition of alloys as related to their mechanical properties, and 3) corrosion resistance and evaluation of stainless and heat-resistant steels. The articles are accompanied by numerous Soviet and non-Soviet references. No personalities are mentioned.

Pashkov, P. O., and V. A. Bratukhina, Engineer. Mechanical Strength of Foil 214

Balandin, Yu. F., Candidate of Technical Sciences. Thermal Fatigue of Metals 230

Chechulin, B. B.; V. I. Syshchikov, Engineer; and Ye. S. Reynberg, Candidate of Technical Sciences. Investigation of the Fatigue Strength of Titanium 263

Yamshchikova, A. I., Candidate of Technical Sciences. Effect of Vanadium, Molybdenum, and Niobium on the Properties of Alpha Alloys of Titanium 279

Khesin, Yu. D. Heat Treatment of Two-Phase Alloys of Titanium 298

Moroz, L. S., and Khesin, Yu. D. Anomalous Grain Growth of Metals in Vacuum 312

Bruk, B. I., Candidate of Technical Sciences; A. S. Zav'yalov; and G. I. Kapyrin, Candidate of Technical Sciences. Investigation of the Redistribution of Elements in Metallic Alloys and Bruk, B. I. Solubility of Carbon in Alpha-Iron 326

Gel'derman, L. S., Candidate of Technical Sciences; and E. L. Kulyapina, Engineer. Structure and Properties of Forgings as Influenced by Forging Conditions 349

Shul'kin, S. M., Candidate of Technical Sciences; A. I. Yamshchikova. Properties of Single-Phase Weldable Titanium Alloys 358

Strokan, B. V., Candidate of Technical Sciences. Modeling in Corrosion Tests Made in Moving Sea Water 367

Rechitskaya, S. Ye., Engineer; and N. I. Lennova, Engineer. Use of the Electron Microscope in Investigating the Structure of Type-KI-464 Austenitic Steel at Various Degrees of Susceptibility to Intergranular Corrosion 381

AVAILABLE: Library of Congress

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

SHUL'KIN, S.M., kand.tekhn.nauk; YAMSHCHIKOVA, A.M.

Properties of single-phase weldable titanium alloys. Metallovedenie 3:358-366 '59. (MIRA 14:3)
(Titanium alloys—Welding)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOVA, KH. G.

USSR/Zooparasitology - Acarina and Insect-Vectors of Disease Pathogens. G-4

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10098

Author : Nel'zina, E.N., Slinko, L.I., Kadatskaya, K.P., Ivanov, K.A., Yamshchikova, Kh.G., Poltavtsev, N.N., Skirda, G.I.

Inst :

Title : Ixodic Ticks (Parasitiformes, family Ixodidae) of Rodents in Northwestern Caspian Coast.

Orig Pub : Sb. tr. Astrakhansk. protivochumn. st., 1955, No 1, 416-433

Abstract : The fauna of ixodic ticks in the district studied is comparatively sparse (5 species, more or less, are numerous); individual specimens may be regarded as of Kirgiz and European-Siberian origin. Closest biocenotic ties with rodents are found in Ixodes laguri laguri and Thipicephalus schulzei. The first of these (steppe species) is connected with rodents who build deep, comparatively

Card 1/2

USSR/Zooparasitology - Acarina and Insect-Vectors of Disease Pathogens. G-4

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10098

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

permanent burrows (susliks, hamsters) and is surmised to play a substantial role in the epizoology of tularemia and some ricketsioses among susliks, hamsters and field mice. Rh. schulzei inhabits semideserts; its principal hosts are the small and yellow susliks.

Card 2/2

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

KOBRINSKIY, A.Ye.; SHLYAKHTIN, A.V.; YAMSHCHIKOVA, M.N.

Vibrations of nonlinear systems caused by periodical impacts.
Trudy Inst.mash.Sem.po teor.mash. 18 no.70:49-67
(MIRA 12:1)

(Vibration)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

KOBRINSKIY, A.Ye.; SHLYAKHTIN, A.V.; YAMSHCHIKOVA, M.N.

Theory of vibration impact machines. Trudy Inst. mash. Sem. po teor. mash. 20 no. 79:27-43 '60. (MIRA 13:12)
(Vibrators) (Impact)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOVA, M.N.

Periodic movements of a vibratory-percussive system at various recovery coefficients. Teor.mash.i mekh. no.105/106:50-61 '65.
(MIRA 18:4)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOVA, N.A., inzh.

Device for boring guide heads of side rudders. Sudostroenie 27 no.12:62 D '61. (MIRA 15:1)

(Steering gear)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

MAL'NIKOV, S.A.; GORBACHEVA, F.Ye.; YAMSHCHIKOVA, N.A.

Use of exercise therapy in progressive muscular dystrophy.
Trudy 1-go MMI 24:203-212 '63 (MIRA 17:3)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

POROKHOVA, V. Ya.; YAMSHCHIKOVA, N.A.

Exercise therapy in hysterical paralysis and paresis. Trudy 1-go MMI 24:344-352'63 (MIRA 17:3)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHCHIKOVA, N.A.

Use of exercise therapy and massage in treating myopathy.
Vop. kur., fizioter. i lech. fiz. kul't. 28 no.4:344-346
Jl-Ag '63. (MIRA 17:9)

1. Iz kliniki nervnykh bolezney (zav.- prof. V.V. Mikheyev)
I Moskovskogo ordena Lenina meditsinskogo instituta imeni
Sechenova.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHTEKHN, S.L.

Effect of the palatal structure on the singing voice [with summary in English]. Vest.oto-rin. 19 no.6:88-91 N-D '57 (MIRA 11:3)

1. Iz L'vovskogo logopedicheskogo i foniatricheskogo dispansera.
(PALATE, anat. and histol.
eff. of structure on voice in singing)
(VOICE
eff. of palatine structure on singing)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMSHTEKIN, S.L.

Influence of the structure of the palatal arch and of the epiglottic cavities on the function of the vocal apparatus. Stomatologiia 38 no.5:48-50 S-O '59. (MIRA 13:3)

1. Iz L'vovskoy gorodskoy stomatologicheskoy poliklinik (glavnyy vrach V.G. Starodubtseva).
(PALATE) (EPIGLOTTIS) (VOCAL CORDS)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

AUTHOR: Yamtol'skiy, V.G. SOV/109-3-12-10/13

TITLE: Diffraction of a Plane Wave on a Wire Grid Situated Inside a Dielectric Layer (Difraktsiya ploskoy volny na provolochnoy setke, raspolozhennoy vnutri dielektricheskogo sloya)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 12, pp 1516 - 1518 (USSR)

ABSTRACT: The system considered is shown in the diagram on p 1516. It consists of a wire grid situated inside a flat dielectric layer, having a permittivity ε. The distance between the wires of the grid is d. The radius of the wires is ρ. The thickness of the dielectric layer is $2r$ and α is the wave number. Technically, the most important case is when the grid is situated in the middle of the layer. Assuming that the wires of the grid carry currents I, the field excited by the currents when $r = \infty$ can be written in the form of Eq (1) where α' is the wave number in the dielectric. At a great distance from the wires, the field can be written as Eq (2). The field at the surface of the wires can be written as Eq (3), where R_k is defined by Eq (4). Consequently, the field produced by the grid outside the dielectric layer can be

Card1/2

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

Diffraction of a Plane Wave on A Wire Grid Situated Inside a Dielectric Layer

written in the form of Eq (5), where T_k is the transmission coefficient of the wave through the dielectric-air boundary, which is defined by Eq (6). If now a plane wave impinges on the grid (from the negative direction of the axis x), the field in the plane of the grid is expressed by Eq (8), while the field transmitted through the dielectric is given by Eq (9). The above equations permit the complete solution of the problem; thus, the transmission coefficient of the system which is defined by Eq (11), can be expressed as Eq (12); the functions F_1, F_2 and F_3 of Eq (12) are defined by Eqs (13), (14) and (15). There are 1 figure and 6 references, 3 of which are English, 1 German and 2 Soviet.

SUBMITTED: October 4, 1957

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

S/717/62/000/007/009/010
D207/D302

AUTHORS: Yamyashev, A.V., Candidate of Technical Sciences, and Zubko, A.M., Candidate of Physico-Mathematical Sciences

TITLE: The effect of melting in vacuum on the composition and properties of metals and alloys

SOURCE: Dnepropetrovsk. Institut metallovedeniya i fiziki metallov. Problemy metallovedeniya i fiziki metallov, no. 7, Moscow, 1962, 450 - 471

TEXT: The authors report a series of experiments, started in 1955, on the effect of vacuum melting in induction furnaces on properties of metals and alloys. Tests on electrolytic and Armco iron showed that simple remelting at 8 x 10^{-3} mm Hg removed most of the hydrogen and addition of carbon to the melt reduced the oxygen content by a factor of 5, even at 0.5 mm Hg. Heat treatment at 1600 - 1750°C at 10^{-3} - 10^{-4} mm Hg reduced the sulphur content only slightly. Armco iron heated in a vacuum showed strong evolution of CO before melting and of hydrogen after melting and during pouring. Work on the ball-

Card 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

bearing steel ШХ 15 (ShKh15) was carried out together with another laboratory in the author's Institute. It was found that ShKh15 steel with low-oxygen and globular phase content could be obtained by melting together commercial iron and electrolytic chromium in vacuum and by adding carbon before other admixtures (Al, Si). Simple remelting in vacuum reduced considerably the amounts of residual manganese, oxygen and nitrogen in the ferrite steel Х28 (Kh28). Addition of carbon to Kh28 melted in vacuum improved considerably its impact strength. Strong reduction of the oxygen nitrogen and non-metallic content, and an improvement of mechanical properties were obtained for the steel 18ХНВА (18KhNVA) by preparing it in vacuum. Residual nitrogen and hydrogen could be reduced very considerably in nickel by melting in vacuum. Acknowledgements are made to M.M. Fillipycheva, L.M. Slavina and S.N. Fedorov, all of whom took part in the experimental work. There are 5 figures, 14 tables and 8 references: 2 Soviet-bloc and 6 non-Soviet-bloc. The references to the English-language publications read as follows: Dastu and I. Chipman, J. Metal Trans., 41-49, 1949; I.A. Cordier and I. Chipman, J. Metal Trans., 7, 905-917, 1955; W. Binder, R. Hevard and H. Spendelow, Trans. ASM, 43, 95, 1951.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMZIN, I.I. CAND PHYSICOMATH SCI

Dissertation: "Atomic Decay of Electrons."

2 March 49
Inst of Crystallography, Acad Sci USSR.

SO Vecheryaya Moskva
Sum 71

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMZIN, I. I.

Electrons

Atomic scattering of electrons; verification of laws of atomic scattering of electrons according to intensities of electron diffraction patterns. Trudy Inst. krist. no. 5, 1949.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMZIN, I. I.

USSR/Physics Apr 49
Crystallography
Films, Deposited

"Experimental Verification of the Theory of the Elastic Scattering of Fast Electrons," I. I. Yamzin, Z. G. Pinsker, Inst of Cryst, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LXV, No 5

Measured intensities of interference maximums from polycrystallic films of Al, Cu, Ag, Au, beta-Sn, Zn, and Mg on electrograms. States that absence of any connection between thickness of sample and corresponding theoretical and experimental intensities

39/49T106

USSR/Physics (Contd) Apr 49

indicates absence of dynamic scattering in these films. Thus, justified applicability of theory of atomic scattering and kinematic theory of scattering in crystal lattices of light and quite heavy elements during passage of electrons of 38- to 56-kv energies through films of average thickness up to $5 \cdot 10^{-6}$ cm. Submitted by Acad A. A. Lebedev, 24 Jan 49.

39/49T106

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

USSR/Physics - Microscopes, Electron
Electrical Equipment Feb 50

"High-Voltage Apparatus for Electronography," I. I. Yamzin, Inst of Cryst, Acad Sci USSR, 4 pp

"Zavod Lab" Vol XVI, No 2

Two basic types of high-voltage apparatus (50 kv) are designed mainly for use with electron microscopes. First type is modification of ordinary roentgen apparatus. Second type uses principle of rectification of HF current from tube generator, and is extremely expensive and complex. Simplified type invented by Yamzin uses principle

USSR/Physics - Microscopes, Electron (Contd) 159T86 Feb 50

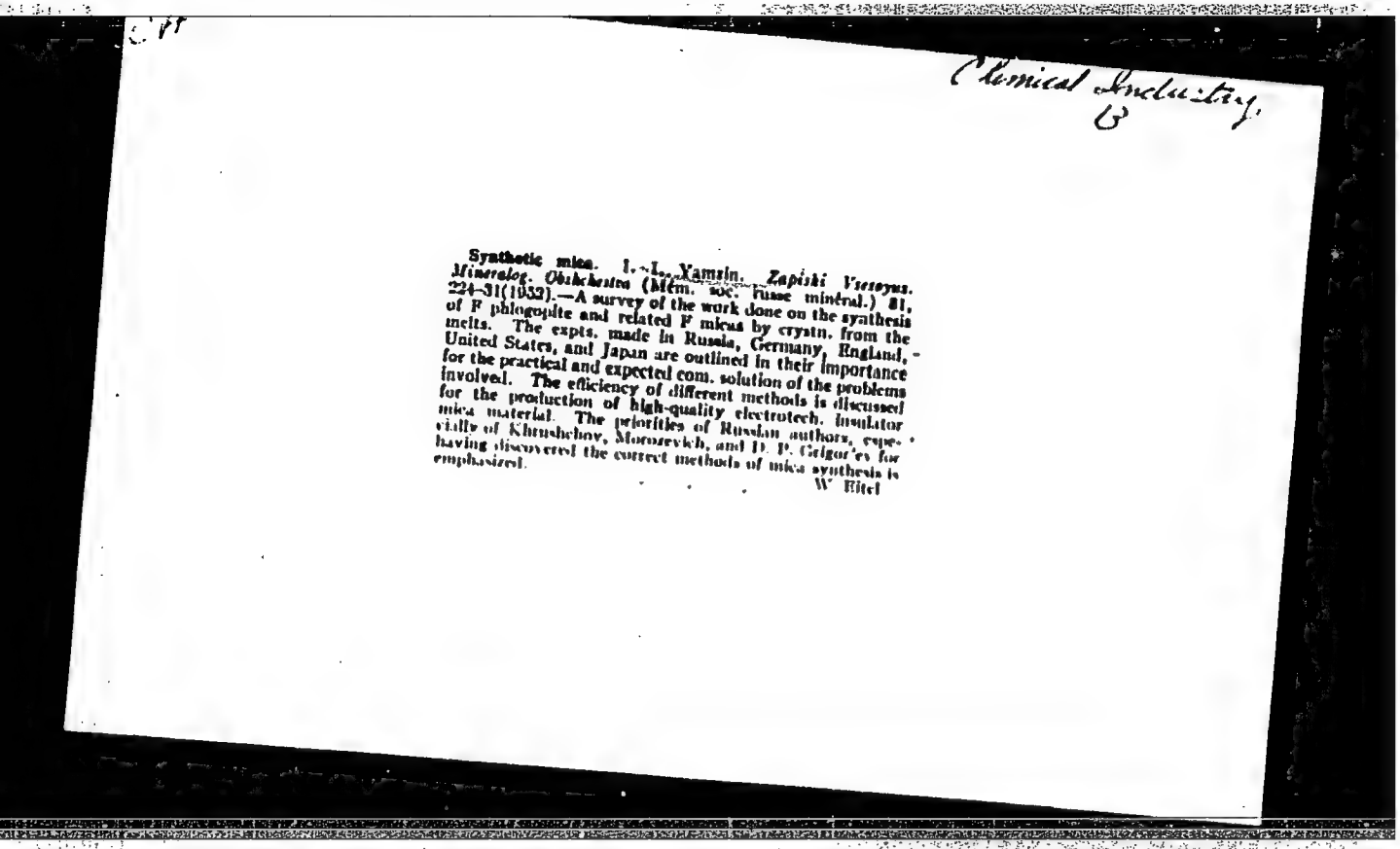
of amplification of audio-frequency oscillations produced by tube generator with voltage amplitude at amplifier output of 100-150 v. This voltage is raised to 30 kv and rectified by kenotron rectifier. Use of relatively low-frequency current permits elimination of power losses in various circuit elements, simplification of construction, and use of standard radio tubes and parts. Claims 10-12 hr/day operation for over a year under use with electronograph 0.1-0.5 ma with operating voltage of 45-55 kv. Only service necessary for this period was tube replacement.

159T86

FA 159T86

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7



Chemical Industry
8

Synthetic mica. I. I. Yamzin. *Zapiski Vsesoyus. Mineralog. Obshchestva* (Mém. soc. russe minéral.) 61, 224–31(1932).—A survey of the work done on the synthesis of F phlogopite and related F micas by crystn. from the melts. The expts. made in Russia, Germany, England, United States, and Japan are outlined in their importance for the practical and expected com. solution of the problems involved. The efficiency of different methods is discussed for the production of high-quality electrotech. insulator mica material. The priorities of Russian authors, especially of Khrushchov, Moorevich, and D. P. Grigor'ev for having discovered the correct methods of mica synthesis is emphasized.

W. Eitel

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

[illegible], L. I.

"Lattice Structure of Silicon Oxide Tetrahedrons in Mica"
Tr. in-ta Kristallogr. AN SSSR, (1953, 121-134)

The usual assumption of hexagonal symmetry of silicon oxide tetrahedrons in mica seems to be wrong. The distance K - O shortens, if the lattice is ditrigonal, which occurs at a certain inclination of tetrahedrons. The distance K - O and the dimensions of an elementary cell computed under this assumption are in good agreement with experimental values. (RZhFiz, No 9, 1955)

SO: Sum-No 787, 12 Jan 56

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

1. YAMZIN, I. I., SHASHKINA, T. I.

2. USSR (600)

4. Chemistry, Analytical

7. New method of qualitative chemical analysis, Priroda 42, no. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

Stabilization of the Temperature Conditions of Electric Resistance Furnaces. V. V. Vernikovskii and I. I. Yamzin. (*Zavodskaya Laboratoriya*, 1956, **21**, (4), 462–463). (In Russian). A temperature regulating arrangement, suitable for resistance furnaces working at high temperatures (1500–2500° C), is described. For a carbon-element furnace the power was kept within ±0·5% of the required mean value.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMZIN, I.I.

Lattice structure of silicate tetrahedra in micas. Trudy Inst.krist. no.9:251-258 '54. (MLRA 7:11)

1. Institut kristallografii Akademii nauk SSSR.
(Mica) (Silicates) (Crystallography)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMZIN, I.I.

Orientating action of a magnetic field on the growth of dia- and paramagnetic crystals. Trudy Inst.krist.no.11:206-211 '55. (Magnetism) (Crystallography) (MIRA 9:6)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMZIN, I. I

Structure and morphological peculiarities of fluorophlogopite and teniolite. I. I. YAMZIN, V. A. TIMOFEEVA, T. I. SHASHKINA, E. N. BELOVA, AND N. V. BELOV. *Zapiski Vsesoyuz. Mineralog. Obshchestva*, 84 [4] 415-21 (1955).—Two different micas were synthesized, fluorophlogopite, $KMg_3(SiAlO_{10})F_2$ (I), and teniolite, $KMg_2Li(Si_4O_{10})F_2$ (II), having the fluorophlogopite structure. The micas were obtained by slow cooling of a melt of the pure oxides and fluorides in stoichiometric proportions. Differential thermal analysis of the melts yielded melting points of 1340° ± 5°C. and 1185° ± 5°C. for I and II, respectively. X-ray measurement of interplane distances showed the same values as in various natural micas of the I type; values of distances a, b, c_0, and c were 5.32, 9.16, 10.07, and 10.2, respectively; the monoclinic angle was 100°. The micas synthesized showed no change in structure when heated from room temperature to 1000°C. from the powder X-ray patterns, in contrast to natural phlogopite. Optical properties measured were n_γ, n_β, and n_α, having values of 1.549, 1.548, and 1.522, respectively, for I and 1.540, 1.540, and 1.513 for II. Birefringence was 0.41 and the angle $2V$ was nearly 0. II was transparent in the visible range above 270 mμ. Morphological characteristics shown reveal the spiral growth of crystals and the presence of screw dislocations. Star formations and stepped "hills" on crystal faces were observed. 12 figures, 22 references. D.T.W.

YAMZIN, I. I.

USSR/Physical Chemistry. Crystals. B-5

Abs JoAPPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

Author : V. A. Timofeyeva, I. I. Yamzin
Inst : Institute of Crystallography
Title : The Formation of Corundum and Spinels from the Gaseous Phase

Orig Pub: Tr. In-ta kristallogr. AN SSSR, 1956, vyp 12, 67-72

Abstract: In conducting experiments on the crystallization from the fusions of mixtures of oxides and fluorides at a high temp. there was discovered from the gaseous phase, depending on the composition of the batch, the formation of crystals of corundum, $MgO \cdot Al_2O_3$, $ZnO \cdot Al_2O_3$, ZnO, $MnO \cdot Al_2O_3$, $ZnO \cdot Fe_2O_3$. The form of crystals is described and the values of coefficients of hardness and refraction are given. The derivative products were carefully dehydrated and the authors believe the reactions proceed without the participating water, in contrast to the assumption made previously (Lacroix A., Bull. Soc. min., 1887, 10, 157-158).

Card 1/1

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

S/564/57/000/000/020/029
D258/D307

AUTHORS: Yamzin, I. I., and Leyzerzon, M. S.

TITLE: Synthetic micas, their properties and application

SOURCE: Rost kristallov; doklady na Pervom soveshchanii po rostu kristallov, 1956 g. Moscow, Izd-vo AN SSSR, 1957, 277-286

TEXT: The present work is concerned with some results of the studies on the crystallization of fluorophlogopite and teniolite, carried out in Laboratoriya morfologii kristallov Instituta kristallografii (Laboratory of Crystal Morphology of the Crystallography Institute) on 50 - 100 g melts. Some results are given of analogous work on 1 - 5 kg melts, carried out at Laboratoriya prirodnoy i iskusstvennoy slyudy VNII-asbesttsementa (Laboratory of Natural and Artificial Mica of the VNII of Asbestos Cement). The optimum charge compositions were

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

Synthetic micas...

$$KF \cdot 0.5\ MgF_2 \cdot 2.5\ MgO \cdot 3SiO_2 \cdot 0.5\ Al_2O_3 \quad (1)$$

for fluorophlogopite and

$$KF \cdot LiF \cdot 2MgO \cdot 4SiO_2 \quad (2)$$

for teniolite. These compositions gave crystals free from glass, forsterite, mullite, etc. The best results were obtained when (a) fluorophlogopite was heated rapidly to 1380°C, held at this temperature to complete the fusion, and slowly cooled to below crystallization temperature; (b) teniolite was heated rapidly to 1210°C, held until molten and slowly cooled. These heating regimes avoided losses of volatile components. The resulting crystals were up to 10 cm^2 x 1.5 mm, and were of sufficient quality for some of their physical, chemical, electrical and mechanical properties to be measured and compared with those of natural micas. The crucible-less method of fusion was successfully tried. To prepare ceramic products, the synthetic micas were ball-milled,

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

S/564/57/000/000/020/029
D258/D307

Synthetic micas...

bonded with 10 - 15% of 85% H_5PO_4, pressed at 700 kg/cm^2, and heated for 1 1/2 hrs at 950 - 1000°C. Some applications of synthetic micas in electrical, radio, and aircraft industries are mentioned. The following workers assisted in the work: G. G. Lemmlein, V. A. Timofeyeva, V. V. Vernikovskiy, T. I. Shashkina, Ye. N. Belova, and N. V. Gliki (Crystallography Institute, and Yu. N. Ul'ko, S. I. Sokol'skiy, O. L. Feofilova, A. S. Naletov, and I. M. Gol'dman (VNII of Asbestos Cement). There are 7 figures and 2 tables.

Card 3/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

AUTHOR: Yamzin, I.I. SOV/70-4-3-25/32

TITLE: An Apparatus for Neutronographic Structure Analysis

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 3, pp 423-425 (USSR)

ABSTRACT: The diffractometer described was designed specially for single-crystal work and has dimensions similar to those used in X-ray apparatus. It consists of crystal monochromator, collimator, spectrometer and recording apparatus. A Soller slit system made of Cd plates is used and gives a divergence of about 20'. The monochromator, a single crystal of Pb cut obliquely at 6° to (111) is fixed to the reactor wall and works at $\lambda = 1.1$ Å with $\theta = 11^{\circ}$. This reduces the $\lambda/2$ component to a minimum. The spectrometer is mostly a GUR-3 goniometer as used in the URS-50I diffractometer, but the counter and shielding weigh ~30 kg and have to be separately carried on a ring outside the goniometer. The angular settings are remotely controlled by selsyns. A proportional, BF_3-filled counter shielded by 10 cm of paraffin and 3 cm of B_4C is used. The counter has a single slit collimator of Cd with a divergence

Card1/2

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

SOV/70-4-3-25/32

An Apparatus for Neutronographic Structure Analysis

of 20'. A monitoring counter can be put into the direct beam. The electrical equipment consists of a VSE-2500 HT rectifier, 3 identical counting channels. The counters are immediately followed by 6Zh2B cathode followers leading to AD-1 amplitude discriminators, each having a pre-amplifier raising the signal level by 30 db. The remaining units are: PS-64 counter, RYe-1 rate meter, EPP-09 mechanical counter and recorder.

A specimen curve from a 1 mm^3 KCl crystal is shown. There are 2 figures, and 3 references, 2 of which are Soviet and 1 English.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography of the Ac.Sc.USSR)

SUBMITTED: March 20, 1959

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMZIN, I.I.; NOZIK, Yu.Z.

Adjustment of single-crystal specimens for neutron diffraction study. Kristallografiia 6 no.3:471-473 My-Je '61. (MIRA 14:8)

1. Institut kristallografii AN SSSR.
(Neutron diffraction crystallography)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

S/070/61/006/006/004/008
E132/E135

AUTHORS: Nozik, Yu.Z., and Yamzin, I.I.

TITLE: On the structure of manganese ferrite

PERIODICAL: Kristallografiya, v.6, no.6, 1961, 923-924

TEXT: Manganese ferrite of composition $Mn_{1.03}Fe_{1.97}O_4$ has been examined by neutron diffraction at room temperature and above the Curie point. Single crystals were used in the forms of 6 mm diameter spheres, 60 reflexions being obtained from the zones [110] and [100]. Intensity measurements were accurate to better than 5%. The oxygen parameter U was found to be 0.260±0.002 and X, the amount of inverseness, determined by the proportion of Mn ions in tetrahedral positions, was found to be 0.80±0.04. Intensities were corrected for secondary extinction, the angular disorientation of the mosaic being 1.3°. Tables of observed and calculated intensities are given for nuclear and magnetic contributions to the scattering. The magnetic moments were $\mu_o = 4.60\mu_\beta$ ($T = 4.2\ ^oK$); $|\mu_{oct}| = |\mu_{tet}| = 3.18\mu_\beta$ ($T = 296\ ^oK$).

Card 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

On the structure of manganese ferrite S/070/61/006/006/004/008
E132/E135

The disagreement coefficient was 6.0%. Acknowledgment is expressed to Academician N.V. Belov for advice.
There are 1 table and 5 references; 1 Soviet-bloc, 1 Russian translation from non-Soviet publication and 3 non-Soviet.
The English language references read as follows:
Ref.1: J. Hastings, L. Corliss, Phys. Rev., Vol.104, 328, 1956.
Ref.3: Hamilton. Acta crystallogr., Vol.10, 629, 1957.
Ref.4: Hamilton, Phys. Rev., Vol.110, 1050, 1958.
Ref.5: H. Lipson and W. Cochran. Determination of Crystal Structures, 1953. Russian translation, Moscow, 1956. (Opredeleniye struktury kristallov. p.86)

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography, AS USSR)

SUBMITTED: June 27, 1961

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMZIN, I.I.; NOZIK, Yu.Z.; BELOV, N.V., akademik

Neutron diffraction study of the cubic modification of PbF_2. Dokl. AN SSSR 138 no.1:110-111 My-Je '61. (MIRA 14:4)

1. Institut kristallografii AN SSSR.
(Lead fluoride)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

YAMZIN, I. I.

ALIKHANOV, R. A., Institute for Physical Problems
Acad Sci USSR, Moscow - "Electron diffraction
study of thin films of Ni(OH)2."

BELOV, K. P., Moscow State University - "Magnetic anisotropy in
monocrystals of Ni-Fe-Co alloys." (M-9)

BOKIY, G. B., Scientific Research Institute of
Metallurgy, Moscow - "Some problems of the
Physics of high coercive materials" (M-17)

BOLOTNIKOV, G. A., Institute of Semiconductors,
Leningrad - "Some investigations of non-metallic
ferro and antiferromagnetics" (M-13)

VAINSHTEIN, B. K., Institute of Crystallography,
Academy of Sciences USSR - "Development of electron
diffraction method" (C-11)

YAMZIN, I. I., BELOV, K. P., Moscow State University - "Atomic and magnetic
structures of magnesa ferrite" (J-2)

YEREMENKO, B. V., Institute of the Physics of Metals,
Academy of Sciences USSR, Sverdlovsk. A member
of the IUPAP Commission on Magnetism. See
paragraph 1 of Comment for a complete listing of
members of the Commission. "Some investigations
of Soviet Physics on the theory of ferromagnetism
for the last years" (Invited paper. Section M-11)

paper to be submitted for the IUPAP Intl. Conference on Magnetism and
Crystallography, Kyoto, Japan, 25-30 Sep 1961

ALIKHANOV, R. A., Institute for Physical Problems
Acad Sci USSR, Moscow - "Electromagnetic study of $NiCO_3$"
(Section J-2)

BELOV, K. P., Moscow State University - (1) "The electrical and
galvanomagnetic properties of thin films at very
low temperatures" (K-5); (2) "On the connection
between the spontaneous magnetization of current
carriers and the Hersh-effect in ferromagnetic alloys"
(K-4); "The exchange interaction and magneto-
crystalline anisotropy in ferromagnetic alloys"
(M-1); "Ferromagnetic alloys" (M-2)

BELOV, K. P., and YAMZIN, I. I., Institute of
Crystallography, Moscow - "Electron diffraction
study of thin films of $Ni(OH)_2$"

BERSUKER, I. B., Institute of Chemical Physics,
Moscow - "Theory of ferromagnetic alloys" (M-3)

BOKIY, G. B., Institute for Physical Problems
Acad Sci USSR, Moscow - "Electron diffraction
study of the structure of solid hydrogen and
deuterium" (C-8)

BOROVIK-ROMANOV, A. S., Institute for Physical Problems
Acad Sci USSR, Moscow - "Antiferromagnetic resonance in carbonated
of transition elements" [also] (M-16)

BOROVIK-ROMANOV, A. S., ARKHIPOV, G. V.,
REMASENKO, O. Ye. - "Piezomagnetic effect in
antiferromagnetic" (M-15)

BOROVIK-ROMANOV, A. S., Institute for Physical Problems Acad Sci
USSR - "Antiferromagnetic resonance in carbonated
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(M-1); "Ferromagnetic alloys" (M-2)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

S/070/62/007/001/006/022
E132/E460

AUTHORS: Yamzin, I.I., Staritsyn, V.Ye., Nozik, Yu.Z.

TITLE: A small-scale neutron diffractometer

PERIODICAL: Kristallografiya, v.7, no.1, 1962, 72-76

TEXT: The mechanical and electrical construction of a small diffractometer (consisting of a table for the crystal specimen and a swinging arm for the counter) is described. It follows the traditional Bragg spectrometer design, the counter arm moving only in the equatorial plane. The two rotations necessary are provided by selsyn motors connected to the work drives through magnetic clutches. A timer controls the rates of rotation. The instrument was tested under typical conditions which were: polycrystalline specimen of Be_2SiO_4, 10 mm in diameter and 30 mm high; enriched BF_3 counter, followed by cathode follower, pulse amplifier and discriminator, counter, integrator and pen recorder forming one channel and a second channel monitoring the primary beam after the Pb monochromator. The primary beam was formed by Cd Soller slits giving a divergence of 20'; the Pb monochromating crystal had a mosaic spread of 20' and was cut at an angle of 6° to the

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A small-scale neutron diffractometer

(111) plane; there was a further Cd Soller slit collimator in front of the counter, 100 mm long with an acceptance angle of 20'. The record of the powder trace shows a line half-width of about 20' at $\theta = 15°$. The device was constructed by Laboratoriya struktury kristallov (Laboratory of Crystals Structure) and the konstruktorskiy byuro (Planning office) of the Institute of Crystallography AS USSR. There are 4 figures.

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography AS USSR)

SUBMITTED: March 11, 1961

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

NOZIK, Yu.Z.; YAMZIN, I.I.

Measurement of the integral intensities of diffraction reflections. Kristallografiia 7 no.1:123-124 Ja-F '62.
(MIRA 15:2)

1. Institut kristallografii AN SSSR.
(Neutrons--Diffraction)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

S/070/62/007/006/016/020
E132/E435

AUTHORS: Kuz'minov, Yu.S., Yamzin, I.I., Belov, N.V.

TITLE: The magnetic structure of yttrium ferrite

PERIODICAL: Kristallografiya, v.7, no.6, 1962, 946-948

TEXT: Neutron diffraction examinations were made of polycrystalline specimens of $Y_3Fe_5O_{12}$ at room temperature and at 300°C, which is above the Curie temperature. Very good agreement was obtained between the observed and calculated intensities. The nuclear contribution was calculated from the structure of S.Geller and M.A.Gillio (J. Phys. and Chem. Soc., v.3, 1/2, 1957). The magnetic contribution was calculated from Neel's model in which the spins of the Fe^{+++} ions occupying the octahedral positions (a) are antiparallel to the spins of the Fe^{+++} ions in the tetrahedral (d) positions. The ions in (a) positions were ascribed a room-temperature magnetic moment of $\mu_a = 4.60\,\mu_B$ and the ions in (d) positions - $\mu_d = 4.16\,\mu_B$. It was assumed that at 0°K the moment of the Fe^{+++} ions was $5\,\mu_B$. The parameters assumed were: (in the space group Ia3d)
O in general positions with (x,y,z) = (-0.0247, 0.0572, 0.1492);

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The magnetic structure ... S/070/62/007/006/016/020
E132/E435

Y in 24(c) positions. There are 2 figures and 1 table.

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography AS USSR)

SUBMITTED: June 8, 1962

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

S/070/62/007/006/017/020
E073/E335

AUTHORS: Kuz'minov, Yu.S., Yamzin, I.I., Mal'tsev, Ye.I. and Belov, N.V.

TITLE: Determination of the amplitude of Raman scattering of thermal neutrons on yttrium nuclei

PERIODICAL: Kristallografiya, v. 7, no. 6, 1962, 948 - 949

TEXT: The atlas of Hughes on neutron cross-section gives the value $\sigma = (8.0 \pm 0.3) \times 10^{-24}$ cm^2. It can be calculated from this value that $b_Y = 0.8 \times 10^{-12}$ cm. There was some doubt about this value since the references given by Hughes did not contain information on the scattering of neutrons on yttrium. The authors of this paper determined b_Y from the measured intensity of neutron diffraction on polycrystalline yttrium oxide, using a 15-mm diameter, 70 mm high specimen pressed from powder of a grain size between 1 and 5 μ. The value of b_Y was determined from tabulated values of $b_O = 0.58 \times 10^{-12}$ cm^2 and the structural model of

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Determination of ....

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E073/E335

yttrium oxide, as published by W. Zachariasen (Norsk. geol. tidsskr. 9, 310 - 316, 1926; Struct. Rept., 16, 218, 1952). The average of three measurements of the amplitude of the Raman scattering was $b_Y = (+0.816 \pm 0.07) \times 10^{-12}$ cm . There is 1 figure.

ASSOCIATIONS: Institut kristallografii AN SSSR (Institute of Crystallography of the AS USSR)
Fiziko-tekhnicheskiy institut AN SSSR (Physico-technical Institute of the AS USSR)

SUBMITTED: June 8, 1962

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030003-7

S/070/63/008/001/004/024
E132/E460

AUTHORS: Kuz'minov, Yu.S., Yamzin, I.I., Belov, N.V.

TITLE: A neutron diffraction study of an yttrium-neodymium ferrite with the garnet structure

PERIODICAL: Kristallografiya, v.8, no.1, 1963, 21-24

TEXT: A polycrystalline specimen of composition $1.5\,Y_2O_3\,1.5\,Nd_2O_3\,5Fe_2O_3$, prepared by ceramic techniques was examined at room temperature and at 360°C (above the Curie point) by neutron diffraction. The wavelength was 1.11 Å.
R. Pauthenet (J.Appl.Phys., v.30, no.4, 1959, 290) proposed a scheme of interactions for garnet structures of composition $3M_2O_3 5Fe_2O_3$ following Neel's analysis of spinels. 4 Fe ions are in octahedral positions 16(a), 6 Fe ions are in tetrahedral positions 24(d) and 6 rare earth ions are in 24(c) positions with coordination 8 (tetrag. anti-prism). He proposed that the sub-lattices a and d had a strong negative exchange interaction and that the sub-lattice c was magnetized anti-parallel to the resultant moment. The interaction c-d is weaker than a-d.
K.P.Belov and L.A.Malevskaya, on the other hand, suggested that the c sub-lattice was not ferromagnetically ordered (Izv. AN Ser.fiz.,

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A neutron diffraction ... S/070/63/008/001/004/024
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v.25, no.11, 1961, 1371-1375). The latter suggestion is here shown experimentally to be correct. The chemical unit cell was cubic, Ia3d, with a = 12.48 Å and extra lines were not observed. The intensities were measured and were also calculated. The differences between the intensities above and below the Curie point gave the magnetic contribution which was compared with that calculated from two sub-lattices (Belov) and from three (Pauthenet). Very good agreement with Belov's model was obtained. The conclusion was checked by examining a specimen of composition $1.5Y_2O_3 \cdot 1.5Nd_2O_3 \cdot 5Al_2O_3$ which should show extra lines if the Nd were ordered - these were not found. There are 2 figures and 1 table.

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography AS USSR)

SUBMITTED: August 9, 1962

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